

AMENDMENTS TO THE CLAIMS

Please cancel claims 4-26 without prejudice and disclaimer of the subject matter thereof. Further, please amend claim 1 and add new claims 27-33.

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method of inspecting defects, comprising:
a step of assigning an inspection recipe;
a step of inspecting a sample using the inspection recipe assigned; and
a step of outputting results of the inspection;
wherein said step of assigning an inspection recipe further includes:
an image signal acquisition step in which images of a sample are each sequentially acquired under a plurality of sets of image acquisition conditions differing from each other and a plurality of image signals each different in image acquisition conditions are sequentially acquired; and
wherein said step of inspecting the sample further includes:
a displaying step for displaying the plurality of sequentially acquired image signals together with information of the image acquisition conditions and indexes which indicate appropriateness of the image signals for detecting defects;
an image acquisition conditions determination step for determining the image acquisition condition based upon the displayed images and the displayed indexes;
an image processing step for processing the images acquired under the determined image acquisition conditions by varying defect detection conditions;

a defect detection conditions determination step for determining the defect detection conditions by using information from images processed at the image processing step; and

a defect detection step in which, from each of the plurality of image signals sequentially acquired under different sets of image acquisition conditions in said image signal acquisition step, defect candidates are detected for each of the plurality of sets of image acquisition conditions, and position information of the defect candidates detected is acquired;

~~an OR file creating step in which, on the basis of position information of the defect candidates detected under each of the plurality of sets of image acquisition conditions in said defect detection step, an OR file of defect candidates is created for each of the plurality of sets of image acquisition conditions; and~~

~~—— a reviewing step in which, on the basis of the OR file of defect candidates that was created for each of the plurality of sets of image acquisition conditions in said OR file creating step, the same defect candidate is reviewed only one time.~~

2. (Original) The inspection method according to claim 1, wherein:

in said defect detection step, on the basis of assigned inspection conditions, defect candidates for each of said image acquisition signals are each detected from the image signals sequentially acquired therefrom.

3. (Original) The inspection method according to claim 1, wherein:

in said defect detection step, said image signal acquisition step, said defect detection step, and said classification step are each repeated a plurality of times under the same image acquisition conditions.

4. - 26. (Canceled)

27. (New) The inspection method according to claim 1, wherein said indexes which indicate appropriateness of the image signals for detecting defects incorporate at least one of statistical properties derived from image statistics.

28. (New) The inspection method according to claim 27, wherein said indexes which indicate appropriateness of the image signals for detecting defects incorporate at least one of an image contrast, a differential value, a grayscale level, and a standard deviation.

29. (New) The inspection method according to claim 1, wherein said image acquisition conditions determination step includes a process of selection of the image acquisition conditions under which at least one index takes a predetermined value.

30. (New) The inspection method according to claim 29, wherein the process of selection of the image acquisition conditions is an automatic process.

31. (New) The inspection method according to claim 1, further comprising a step of classification of said defect candidates into one of a plurality of the defect categories.

32. (New) The inspection method according to claim 31, wherein during the step of classification each of said defect candidates is classified into only one of a plurality of the defect categories.

33. (New) The inspection method according to claim 31, wherein during the step of classification each of said defect candidates is classified into only one of a plurality of the defect categories, and image acquisition conditions are selected in accordance with said image acquisition conditions determination step and recorded in said inspection recipe associated with the defect classification.